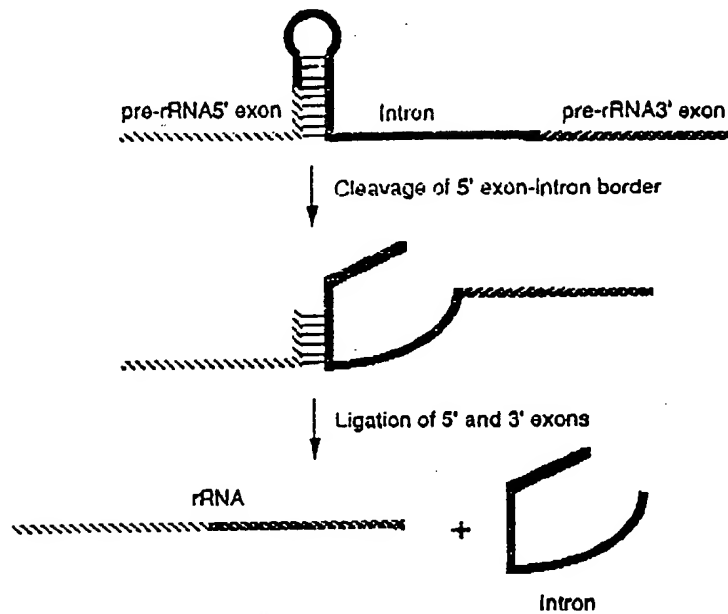
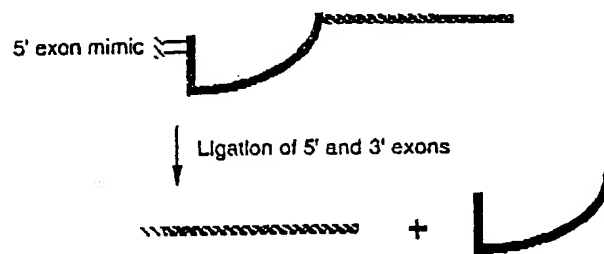


**Figure 1: Targeted Trans-Splicing**

**A. Self-Splicing of the Group I Intron from *Tetrahymena thermophila* pre-rRNA**



**B. Trans-splicing of a 3' exon onto a dinucleotide 5' exon**



**C. Targeted trans-splicing of a new 3' exon onto a targeted 5' exon**

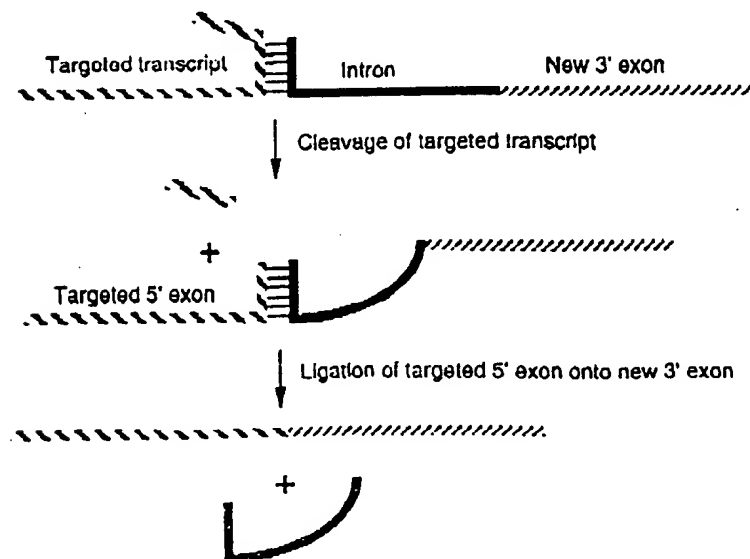
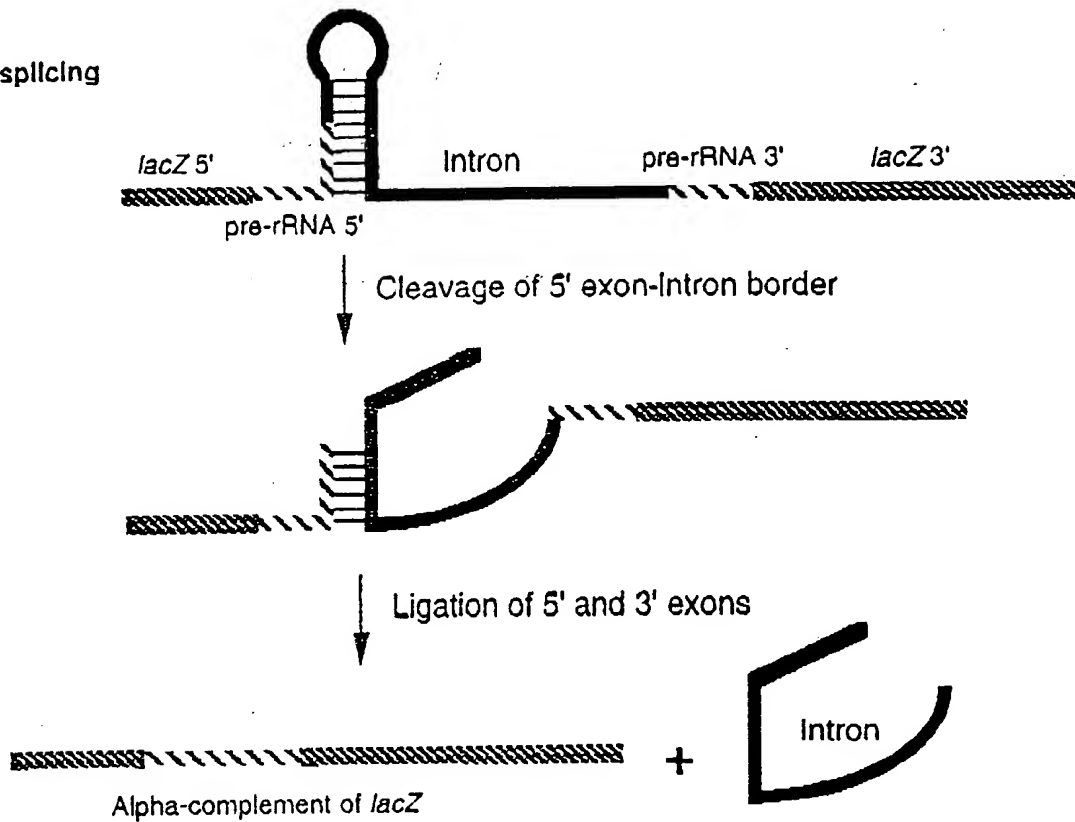


Figure 2: cis- and trans-splicing to recreate *lacZ* (alpha complement) transcripts

A. cis-splicing



B. trans-splicing

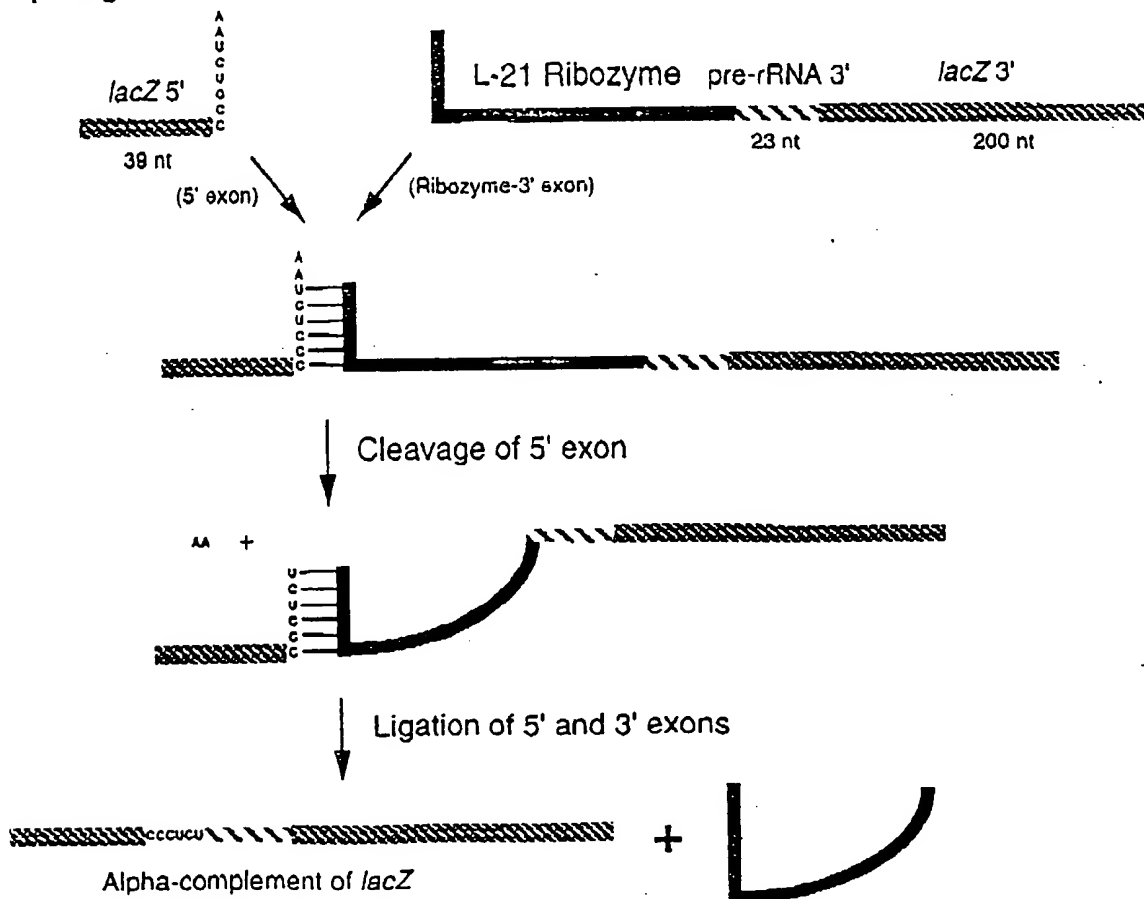
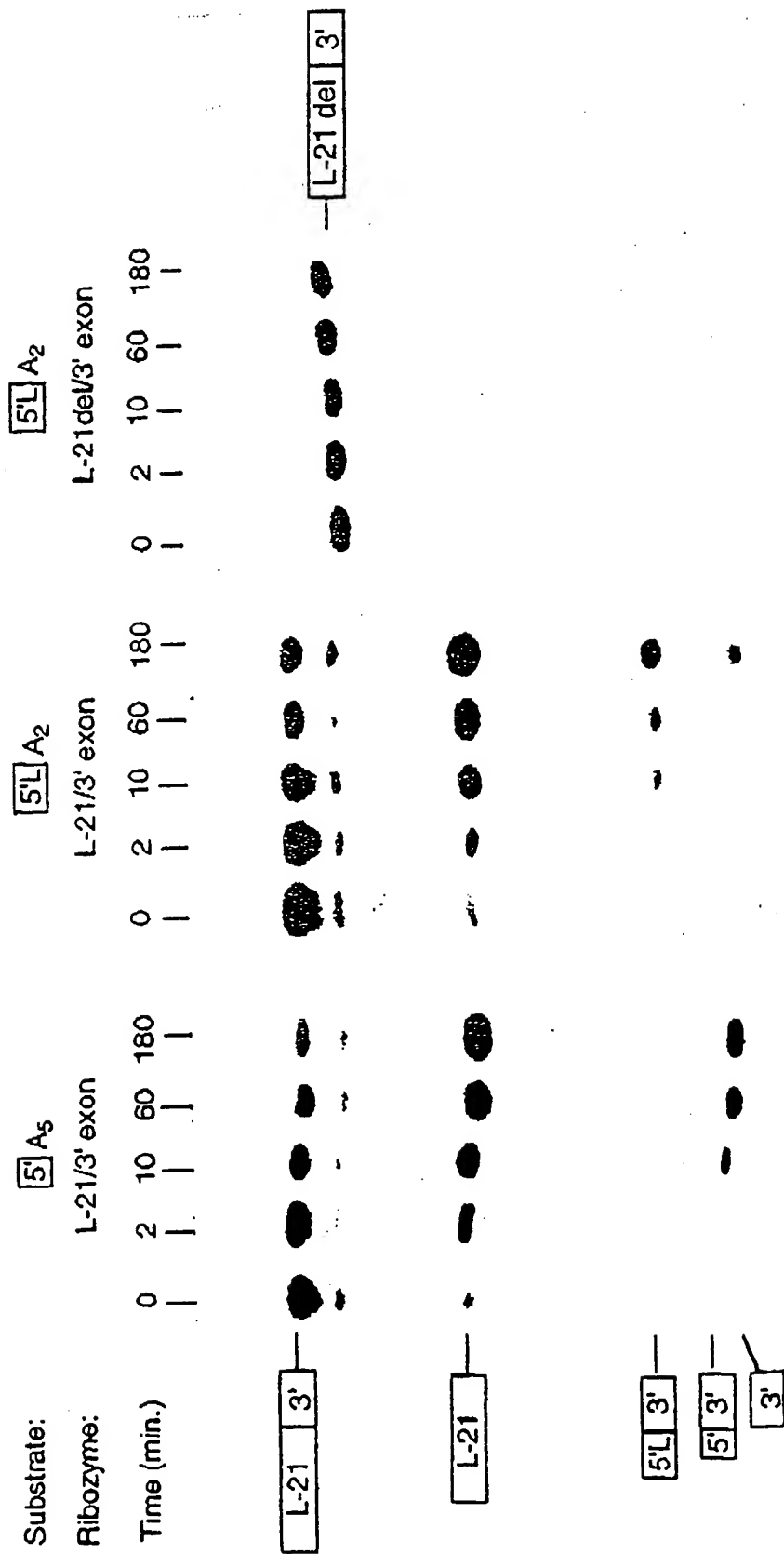


Figure 3: Trans-Splicing to correct truncated *lacZ* transcripts



% Ribozyme-3' Exon Remaining

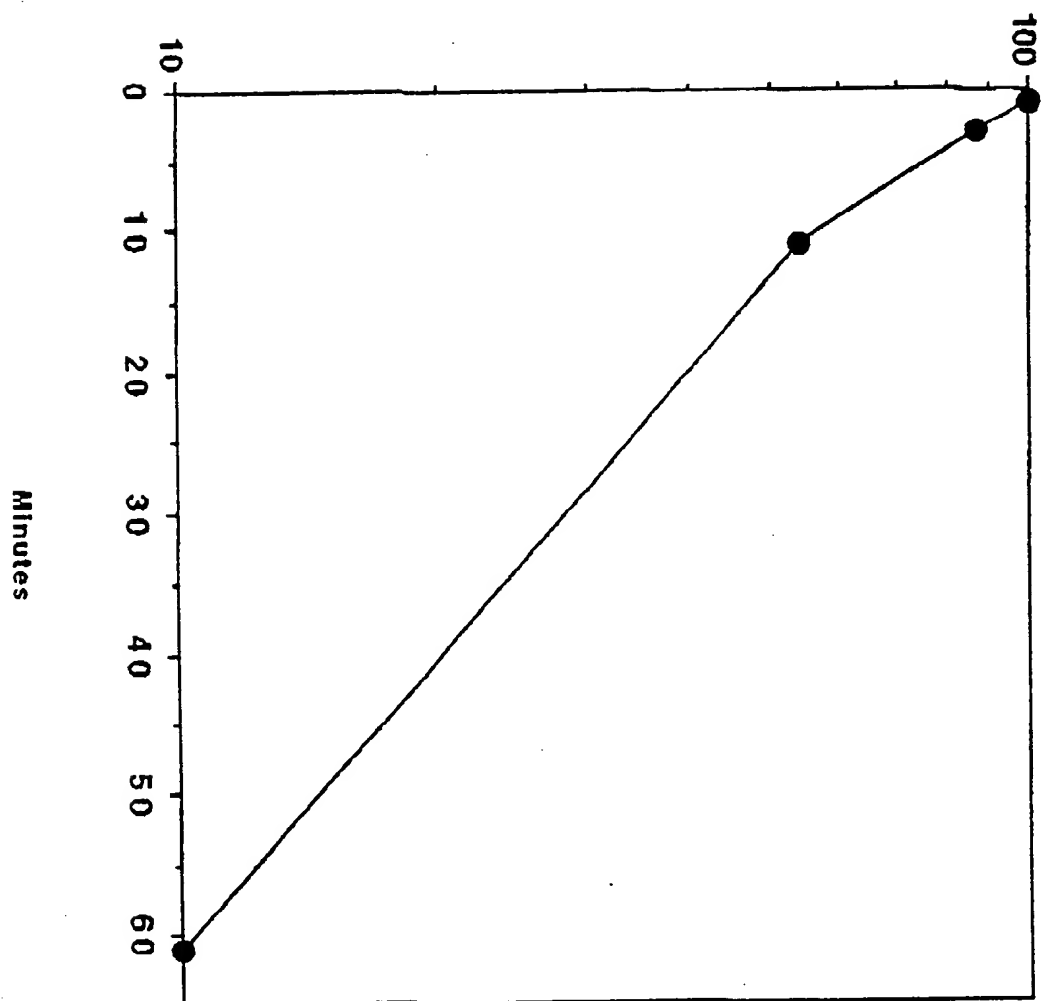


Figure 4: Trans-Splicing Rate

09155514-100208

Figure 5: Hydrolysis releases the 200 nucleotide *lacZ* 3' Exon Sequence

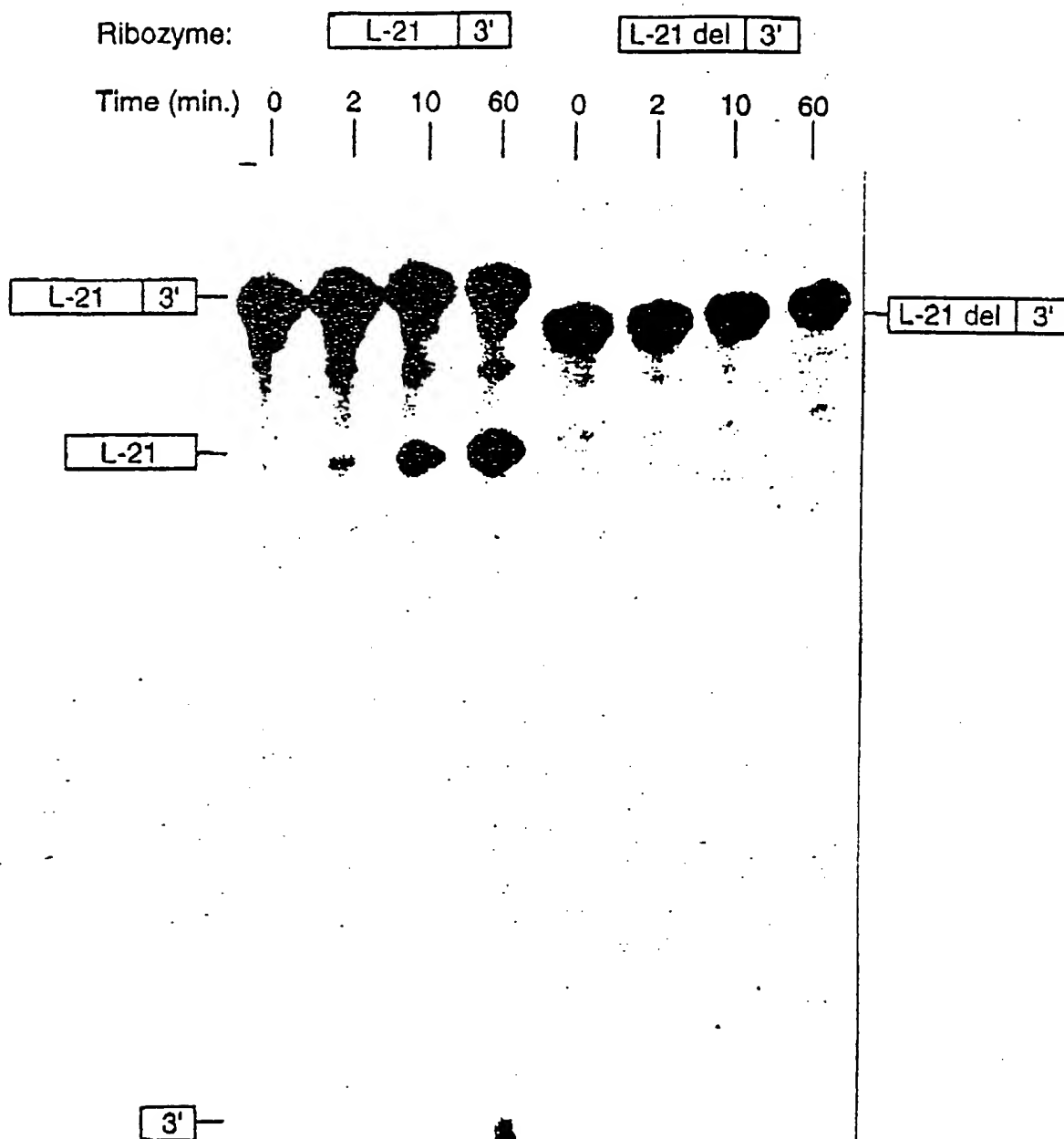
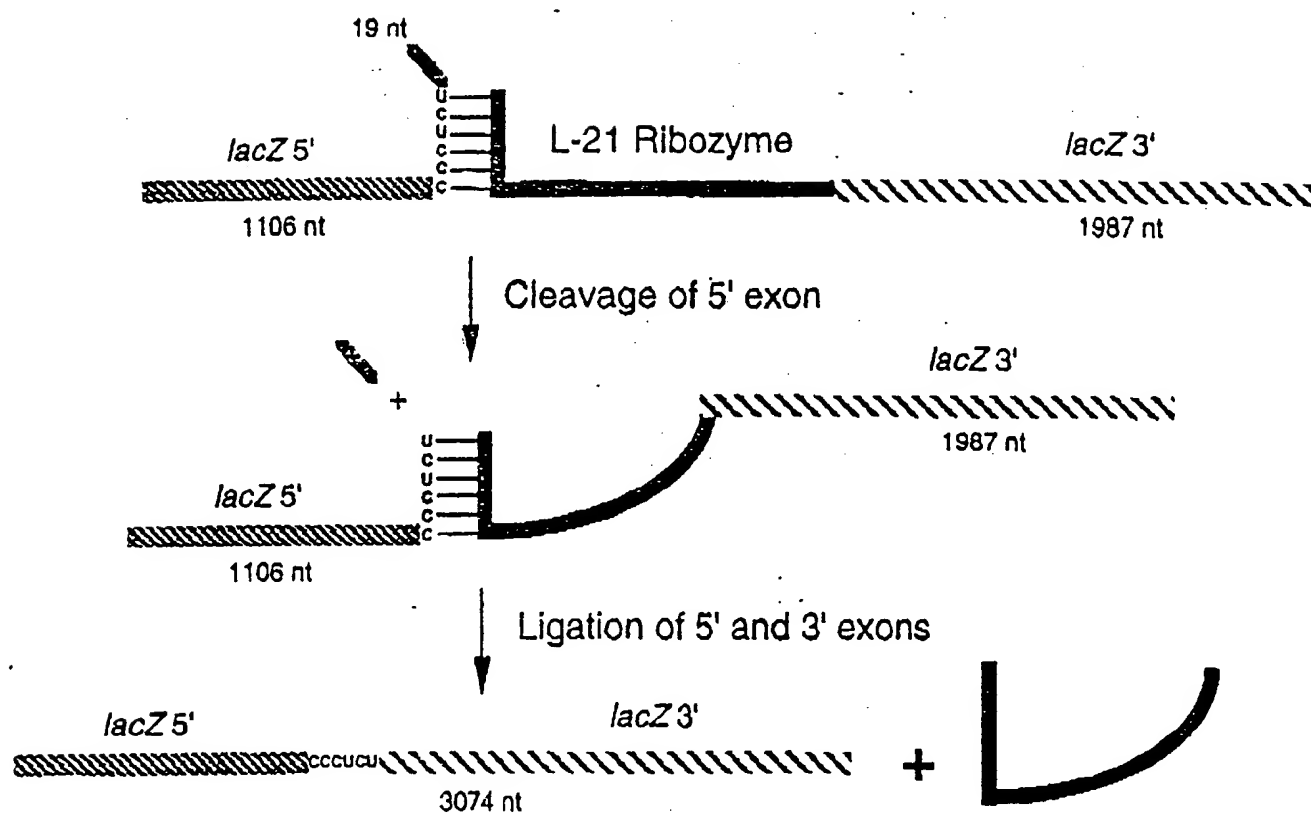


Figure 6: Trans-Splicing to Correct a 1106 Nucleotide Truncated *lacZ* Transcript

A. Trans-splicing scheme



B. Trans-splicing reaction

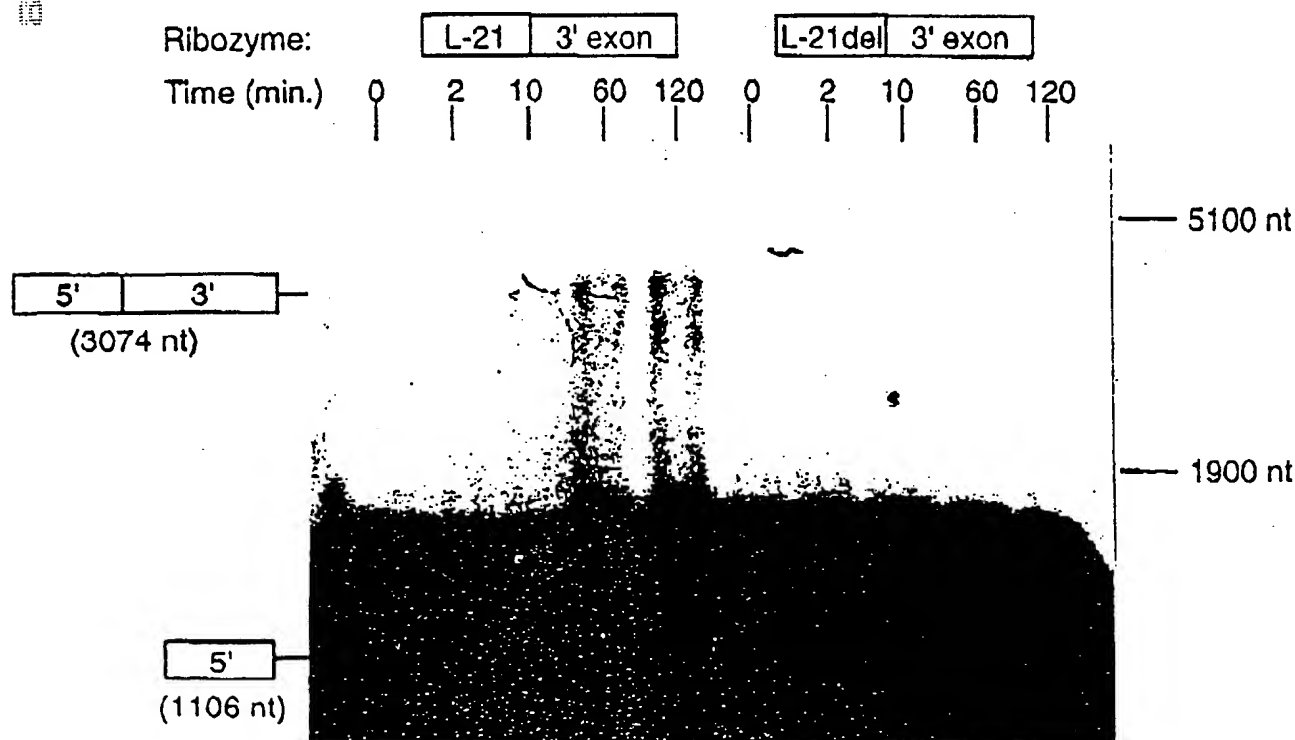


Figure 7: Targeted Trans-Splicing to Correct Mutant  $\beta$ -globin Transcripts

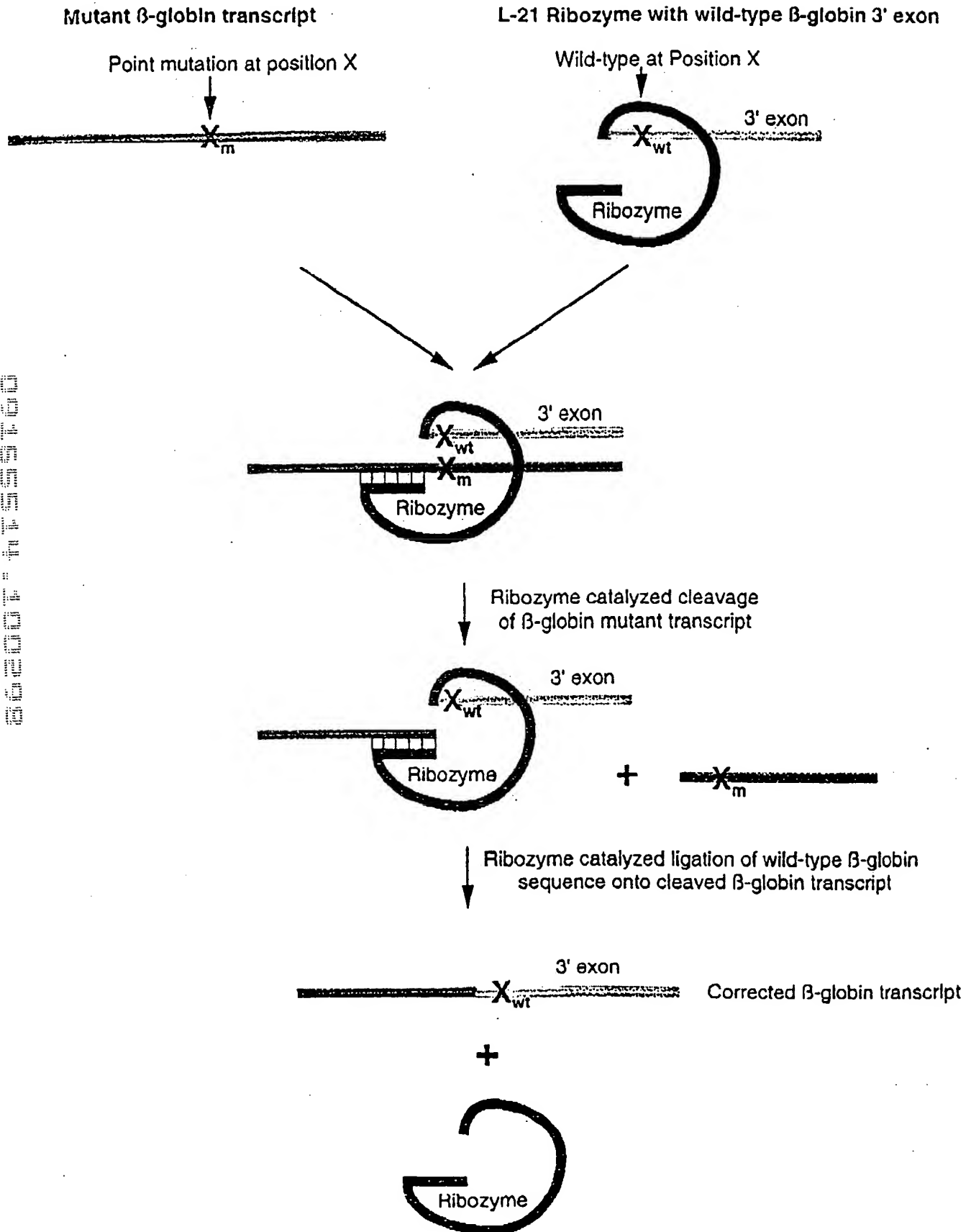


Figure 8: Targeted Trans-Splicing to Mutate HIV gag Encoding Transcripts

